U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2005-155-EA

CASEFILE/PROJECT NUMBER (optional): COC62054, COC60736, COC60730

PROJECT NAME: Williams' Ryan Gulch 31-20-298, 31-2-298 and 34-19-198

LEGAL DESCRIPTION: T.2S, R.98W, Sec. 20 (31-20-298)
T.2S, R.98W, Sec. 2 (31-2-298)
T.1S, R.98W, Sec. 19 (34-19-198)

APPLICANT: Williams Production RMT Company

ISSUES AND CONCERNS (optional): A separate ROW application for the pipeline route for each location will be submitted by Bargath, Inc. The onsite for this location did not include a pipeline ROW, and a pipeline route was not discussed. Satisfactory archaeological survey/report information has not been submitted for the 31-20-298 and 31-2-198 wells.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: The proposed location for the well pads and access roads would be in the Ryan Gulch region of the resource area. The elevation at the proposed location for well 31-20 is 6,968 feet, the elevation at the proposed location for well 31-2 is 6,696 feet, and the elevation at the proposed location for 34-19 is 6,533 feet. Dominant vegetation at the proposed locations for well 31-20 and 31-2 consists of Pinyon-Juniper, while dominant vegetation at the proposed location for well 34-19 is Wyoming big sagebrush (*Artemisia tridentata* subsp. *wyomingensis*). Well density at the proposed locations for wells 31-20, 31-2 and 34-19 is <1 producing wells per square mile, while road density for locations 31-20, 31-2 and 34-19 equals approximately 3.78 , 3.01, and 2.57 miles of road per square mile, respectively.

Proposed Action: The applicant proposes to construct three well pads with dimensions of 200 x 300 feet (1.38 acres; 4.14 acres total). Total area disturbed to construct the three well pads will be approximately 4.95 acres. In addition, the applicant proposes to construct 35 x 2,756 feet (2.21 acres) of new road to access well 31-20, 35 x 3,143 feet (2.52 acres) of new road to access well 31-2, and 35 x 4,518 feet (3.63 acres) of new road to access well 34-19. Total disturbed area to accommodate the three well pads and access roads will equal 13.31 acres.

This Application for Permit to Drill will serve as a request for BLM to initiate a Right-of-Way (ROW) application for the access road and water haul routes, if necessary. This ROW can continue up to the wellhead, and the width of ROW request is 50 feet.

Plans for improvement and/or maintenance of existing roads are to maintain in as good or better conditions than at present. Access roads and surface disturbing activities will conform to standards outlined in the USGS publication (1978) Surface Operation Standards for Oil and Gas Development.

A separate ROW application for the pipeline route will be submitted by Bargath, Inc. The onsite for this location did not include a pipeline ROW, and a pipeline route was not discussed.

Water will be transported by truck from private source at the town of Meeker or from the White River under existing permits. As an alternative, water for the well will be hauled to the location or will be pumped from a local private water source, if available, properly permitted, and negotiations agreed upon. If so, BLM will be notified by Sundry Notice.

Produced waste water could be confined to the pit for a period of 90 days after initial production. During the 90 day period the required waste analysis will be submitted for the Authorized Officer's approval, pursuant to Onshore Oil and Gas Order No. 7 (NTL-2B). A permanent steel tank will be installed in the ground next to the production facilities to contain any produced water for the duration of the well. Drilling fluids and chemicals, and dead waterfowl will be contained in the reserve pit.

Water based reserve pit fluids will be backfilled within one year of construction or by the end of the succeeding summer to allow for evaporation of fluids unless an alternative method of disposal is approved. The backfilling of the reserve pit will be done in such a manner that the mud and associated solids will be confined to the pit and not squeezed out and incorporated into the surface materials. There will be a minimum of three feet of cover (overburden) on the pit. All remaining cutting will be solidified and buried in place, or disposed of in an approved manner. The stockpiled ground cover will be evenly distributed over the disturbed areas. The recommended seed mix to be used on all disturbed areas will be determined by the White River Field Office. The dirt contractor will be provided with an approved copy of the surface use plan.

Chemical pesticides or any other control agent which represents a potential soil, air or water pollutant will not be utilized for any purpose on public lands without express written authorization from the Authorized Officer of the BLM.

The Operator or his contractor will notify the BLM, White River Field Office, (970) 878-3600, forty-eight (48) hours before starting reclamation work that involves earth-moving equipment and upon completion of restoration measures.

This permit will be valid for a period of one (1) year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

During the environmental assessment process for this area, acceptable cultural resource clearance inventories/reports were prepared and submitted only for the 34-19-198 well, under separate cover dated 10 December 2004 by Grand River Institute. Paleo, raptor and threatened and endangered species surveys have been done for the proposed location.

The anticipated start date is 25 June 2005 for well 31-2, 1 July 2005 for well 31-20 and 34-19, and the anticipated duration for construction related activities is 45-60 days which includes drilling and completion.

No Action Alternative: Under the no action alternative, the application would be denied and the well pads and access roads would not be constructed.

NEED FOR THE ACTION: To respond to request by applicant to exercise lease rights and develop potential hydrocarbon reserves.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Pages 2-5 thru 2-6

Decision Language: "Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values."

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The proposed access road and well pads are not located within a thirty mile radius of any special designation air sheds or non-attainment areas. Overall, the proposed action by itself should not greatly compromise National Ambient Air Quality Standards (NAAQS) on an hourly or daily basis.

Environmental Consequences of the Proposed Action: Temporary reductions in vegetal cover resulting from construction activities will leave soils temporarily exposed to eolian processes. During dry and windy periods, air quality may be compromised due to increased

levels of fugitive dust originating from the exposed construction area. Exhaust produced from production facilities and heavy equipment associated with the proposed actions combined with the increasing number of fluid mining activities in the Piceance Creek basin will have cumulative impacts detrimental to local air quality.

Environmental Consequences of the No Action Alternative: None

Mitigation: The operator will be responsible for complying with all local, state, and federal air quality regulations as well as providing documentation to the BLM that they have done so. To minimize production of fugitive dust, vehicle speeds must not exceed 15 mph or dust clouds must not be visible at appropriate speeds. The application of a dust suppressant (e.g. water or "Dust Stop") will be required during dry periods when dust clouds are visible at speeds less than or equal to 15 mph. Stockpiled soils will be covered when left for a period greater than 10 hours, and all disturbed areas will be promptly revegetated.

CULTURAL RESOURCES

Affected Environment: Ryan Gulch 31-20-298 well pad and access road: No inventory data 7/19/2005

Ryan Gulch 31-2-298 well pad and access road: No inventory data 7/19/2005

34-19-198 well pad and access road: The proposed well pad and access road have been inventoried at the Class III (100 % pedestrian) level (Conner *et al* 2005, Compliance dated 7/19/2005) with one cultural resource that could not be relocated in the inventory area.

Environmental Consequences of the Proposed Action: Ryan Gulch 31-20-298 well pad and access road:

Ryan Gulch 31-2-298 well pad and access road:

Ryan Gulch 34-19-198 well pad and access road: It does not appear that the proposed well pad and access road will impact any known cultural resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to cultural resources under the No Action Alternative.

Mitigation: Ryan Gulch 31-20-298 well pad and access road:

Ryan Gulch 31-2-298 well pad and access road:

Ryan Gulch 34-19-198 well pad and access road: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The invasive alien cheatgrass (*Bromus tectorum*) is present throughout the project in areas of unrevegetated earthen disturbance. The principal noxious weeds known to occur in the area are houndstongue (*Cynoglossum officinale)* and mullein (*Verbascum thapsus*).

Environmental Consequences of the Proposed Action: The principal impact to vegetation will be complete removal of vegetation on the well sites and the earthen disturbance associated with it. In terms of plant community composition, structure and function, the principal negative impact over the long term would occur if invasive species or noxious weeds are allowed to establish and proliferate on the disturbed areas resulting from pad and access road construction.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation: Promptly recontour and revegetate all disturbed areas including cut and fill slopes, topsoil stockpiles and road borrow areas with native Seed Mix #3:

3	Western wheatgrass (Rosanna) Bluebunch wheatgrass (Whitmar) Needle and thread Indian ricegrass (Rimrock) Fourwing saltbush (Wytana) Utah sweetvetch Alternates: globemallow	2 2 1 1 1 1	Gravelly 10"-14", Pinyon/Juniper Woodland, Stony Foothills, 147 (Mountain Mahogany)

Eradicate all invasive species and noxious weeds using materials and methods approved in advance by the Field Manager.

MIGRATORY BIRDS

Affected Environment: The project area for locations 31-20 and 31-2 consist primarily of stunted, open-canopied juniper-dominated woodlands intermixed with mixed Wyoming big sagebrush shrublands, while dominant vegetation at the proposed location for well 34-19 consists of Wyoming big sagebrush. There are a number of migratory birds that fulfill nesting functions in these Wyoming big sagebrush and pinyon-juniper types during the months of May, June, and July, including several species identified as having higher conservation interest by the Rocky Mountain Bird Observatory, Partners in Flight program (i.e., Brewer's sparrow, green-tailed towhee, gray flycatcher, pinyon jay, juniper titmouse, black-throated gray warbler, and violet-green swallow). These and more common, generalized species associated with these habitats (e.g., house finch, chipping sparrow, lark sparrow, vesper sparrow, and spotted towhee) are widely represented at appropriate densities in extensive suitable habitats throughout the White River Resource Area.

Environmental Consequences of the Proposed Action: As staked, the 34-19 location (a Wyoming big sagebrush site) is situated within 328 feet of an existing county road. Recent research indicates that nesting populations of sagebrush obligates, including Brewer's sparrow and the towhee, are reduced by 50% within 300 feet of roads. With an average territory size of approximately 2 acres, and depending on the timing of this action, it is possible that 1 to 2 nesting attempts of each species could potentially be disrupted. This impact is considered discountable even in the localized context of 84 Mesa (i.e., 1-2 effective habitat acres relative to about 4,000 acres).

The development of reserve pits at each proposed well pad location may be expected to attract waterfowl and other migratory birds for purposes of resting, foraging, or as a source of free water. It has recently been brought to the White River Field Office's attention that migratory waterfowl (i.e., teal and gadwall) have contacted oil-based drilling fluids stored in reserve pits during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent and nature of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with produced water and drilling and completion fluids that may pose a problem (e.g., acute or chronic toxicity, compromised insulation).

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to disrupt the breeding activities of migratory birds or expose birds to fluids that pose a mortality risk.

Mitigation: The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Methods may include netting, the use of bird-balls, or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator

to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Petroleum Engineer Technician immediately.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: There are no threatened or endangered animals known to inhabit or derive important benefit from the proposed project areas for locations 31-20, 31-2, or 34-19. A small number of northern sage grouse, a BLM sensitive species and recently petitioned for listing, historically occupied 84 Mesa (34-19 location), a large low-elevation sagebrush park. As staked, the 34-19 location is approximately 0.5 miles from a known lek site; however, no sage grouse are known to have occupied 84 Mesa since about the mid-1980's, but these habitats remain available for natural colonization or species recovery actions. The known lek site mentioned above is currently inactive.

Environmental Consequences of the Proposed Action: As originally staked, the 34-19 location was situated about 650 feet from the county road. The location was subsequently moved as close as practical and parallel to the county road (approximately 328 feet) to reduce the net involvement of suitable sagebrush habitat (e.g., continuity and extent) and maximize the use of roadside habitats with suboptimal utility. As currently situated, longer term loss of potential sagebrush habitat attributable to pad construction (i.e., 5.21 acres) would be confined to an area within 328 feet of the county road.

Environmental Consequences of the No Action Alternative: No immediate action would be authorized that would involve the adverse modification of sagebrush or Pinion-juniper habitat. Alternate pad locations would probably be increasingly likely to be situated off the county road, involving more extensive access needs and more extensive direct and indirect loss of sagebrush and overall habitat utility.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: Low elevation Wyoming big sagebrush habitats available on 84 Mesa are considered marginal with respect to year-round occupation by grouse (i.e., especially nest and brood range), but meet the public land health standards as grouse winter range. The proposed action would generally involve habitats whose utility for sage grouse that have been previously compromised by a long-established roadbed. By situating the pad in this roadside position, the proposed action's diminutive contribution to reductions in the overall utility and suitability of 84 Mesa as potential sage grouse habitat is discountable. Under the no-action alternative or the proposed action, as conditioned, 84 Mesa would continue to meet the land health standard for threatened and endangered animals.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The applicant shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: Surface water: Proposed wells #31-2 and 31-20 (and access routes) are located within the Ryan Gulch catchment area. Ryan Gulch is a tributary to Piceance Creek (tributary to the White River) and is located in stream segment 16 of the White River basin. Proposed well #34-19 (and access route) is located within the Yellow Creek/Corral Gulch watersheds. Corral Gulch is a tributary to Yellow Creek (tributary to the White River) and is situated in stream segment 13b of the White River Basin. A review of the Colorado's 1989 Nonpoint Source Assessment Report (plus updates), the 305(b) report, the 303(d) list and the White River Resource Area RMP was done to see if any water quality concerns have been identified. It should be noted that Yellow creek (stream segment 13b) has been identified by the state as a perennial watershed NOT meeting water quality standards for suspended sediment and salinity. The State has classified stream segments 13b and 16 as "Use Protected" and further designated as beneficial for the following uses: Warm Aquatic Life 2, Recreation 2, and Agriculture. The antidegredation review requirements in the Antidegredation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. For these reaches, minimum standards for four parameters have been listed. These parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0, Fecal Coliform = 2000/100 ml, and 630/100 ml E. coli.

Ground Water: A review of the USGS Ground Water Atlas of the United States (HA 730-C) was done to assess ground water resources at the location of the proposed action. The shallowest aquifer underlying the proposed action is the Uinta-Animas aquifer. The Uinta-Animas aquifer at this location consists of the Uinta Formation and the Parachute Creek member of the Green River Formation. During the drilling process it is likely that deep ground water from the Fort Union Formation and Mesaverde Group also be encountered. Local ground water located in alluvial material may also be affected if contaminants are allowed to infiltrate the soils.

Environmental Consequences of the Proposed Action: Construction of access roads and well pads will result in temporary exposure of soils to erosional processes. Heavy equipment

used during construction combined with the removal of ground cover will increase erosive potential due to runoff (overland flows) and raindrop impact during storm events.

Local ground water may be contaminated if a spill results or pit contents are allowed to infiltrate soils. Adverse impacts on deeper ground water are possible as a result of cross aquifer contamination due to drilling.

Environmental Consequences of the No Action Alternative: None

Mitigation: No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 feet of any water bodies (including springs and seeps). The operator will be responsible for complying with all local, state, and federal water quality regulations as well as providing documentation to the BLM that they have done so.

Comply with "Gold Book" surface operating standards for constructing well pads, and access roads. In compliance with the resource management plan, drain dips will be used in place of culverts on slopes exceeding 10%. Energy dissipaters such as large gravels/small cobbles will be used at culvert and drainage dip outlets to minimize additional erosion. To mitigate water being channelized down the roadway, all activity must stop when soils or road surfaces become saturated to a depth of three inches. Mud blading will be prohibited in attempts to reduce further soil displacement. In addition, to mitigate surface erosion due to removal of ground cover at well pads, stockpiled soils must be covered and silt fences will be used on down gradient sides.

Complete reclamation will follow abandonment of well pads and access roads. Access roads and well pads will be recontoured, flow deflectors and sediment traps (woody debris) will be evenly redistributed over all disturbed areas, and 100% of disturbed surfaces will be revegetated with Native Seed Mix #3.

To mitigate contamination of local ground water, environmentally unfriendly substances (e.g. diesel) must not be allowed to contact soils. The use of impermeable matting under equipment is suggested to intercept such contaminants prior to contacting soils.
Furthermore, all pits must be lined and all wastes associated with construction and drilling will be properly treated and disposed of. Finally, aquifers beneficial for human consumption and livestock encountered during the drilling process must be properly sealed to reduce potential for contamination.

Finding on the Public Land Health Standard for water quality: Water quality in stream segments 13b and 16 is currently meeting standards set by the state. The proposed action may result in increased run-off which would elevate sediment loads in stream reaches below the proposed action. Spills or leaks of contaminants would further reduce water quality downstream adversely affecting macroinvertabrates, vertebrates, and algae populations. However, following proper mitigation/reclamation procedures, water quality these stream segments should remain unchanged.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: There are no wetlands or riparian communities that will be influenced by the proposed action. The nearest perennial water source is located approximately 0.68 miles from the proposed location for 34-19, 3.15 miles from the proposed location for 31-2, and approximately 7.11 miles from location 31-20 in agricultural bottomlands in Yellow and Piceance Creeks.

Environmental Consequences of the Proposed Action: Riparian and wetland communities would not be directly or indirectly affected by well pad and road construction-related activities.

Environmental Consequences of the No Action Alternative: There would be no immediate action authorized that would have potential to affect wetland or riparian communities.

Mitigation: None

Finding on the Public Land Health Standard for riparian systems: Because there are no riparian or wetland resources potentially influenced by the proposed or no-action alternatives, a land health standard finding is not relevant. There would be no change in the land health status of downstream riparian and wetland communities.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC's, flood plains, prime and unique farmlands, or Wild and Scenic Rivers, threatened, endangered or sensitive plants exist within the area affected by the proposed action. For threatened, endangered and sensitive plant species Public Land Health Standard is not applicable since neither the proposed nor the no-action alternative would have any influence on populations of, or habitats potentially occupied by, special status plants. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: The following data is a product of an order III soil survey conducted by the NRCS. The accompanying table highlights important soil characteristics. A complete summary of this information can be found at the White River Field Office.

CSU-1 fragile soils are not located within the area of the proposed actions. Thus, controlled surface use stipulations will not apply.

Soil Number	Soil Name	Slope	Ecological site	Salinity	Run Off	Erosion Potential	Bedrock

34	Forelle loam	8-15%	Rolling Loam	<2	Medium	Moderate to high	>60
40	Hagga loam	0-5%	Swale Meadow	2-8	Slow	Slight	>60
64	Piceance fine sandy loam	5-15%	Rolling Loam	<2	Medium	Moderate to high	20-40
70	Redcreek-Rentsac complex	5-30%	PJ woodlands/PJ woodlands	<2	Very high	Moderate to high	10-20
73	Rentsac channery loam	5-50%	Pinyon-Juniper woodlands	<2	Rapid	Moderate to very high	10-20
75	Rentsac-Piceance complex	2-30%	PJ woodland/Rolling Loam	<2	Medium	Moderate to high	10-20

34-Forelle loam (8 to 15 percent slopes) is a deep, well drained soil found on terraces and uplands. It formed in eolian and alluvial material derived dominantly from sedimentary rock. The native vegetation is mainly low shrubs and grasses.

Typically, the surface layer is pale brown loam 4 inches thick. The upper 12 inches of the subsoil is yellowish brown clay loam, and the lower 5 inches is light yellowish brown clay loam. The substratum to a depth of 60 inches or more is very pale brown loam.

Permeability of this Forelle soil is moderate. Available water capacity is high. Effective rooting depth is 60 inches or more. Runoff is medium, and the hazard of water erosion is moderate to high.

40-Hagga loam is a deep, poorly drained soil found on flood plains and alluvial valley floors. It formed in alluvium derived dominantly from sandstone and shale. Slope is 0 to 5 percent. The native vegetation is mainly water-tolerant grasses.

Typically, the surface layer is light brownish gray loam 5 inches thick. Below this to a depth of 60 inches or more is stratified silty clay loam to loamy fine sand.

Permeability of this Hagga soil is moderately slow. Available water capacity is high. Effective rooting depth is 60 inches or more for water-tolerant plants, but it is limited to depths between 10 and 20 inches for non-water-tolerant plants. Runoff is slow, and the hazard water erosion is slight. A seasonal high water table is at a depth of 12 to 24 inches in spring and early in summer.

The concentration of salts and alkali in the surface layer limits the production of plants suitable for hay and pasture. Leaching of the salts from the surface layer is limited by the high water table. Drainage and irrigation water management reduce the concentration of salts. Salt-tolerant species are most suitable for planting.

64-Piceance fine sandy loam (5 to 15 percent slopes) is a moderately deep, well drained soil located on uplands and broad ridge tops. It formed in eolian material and colluvium derived dominantly from sandstone. The native vegetation is mainly low shrubs, grasses, and a few pinyon trees.

Typically, the surface layer is brown fine sandy loam 4 inches thick. The upper 5 inches of the subsoil is brown loam, and the lower 13 inches is light yellowish brown loam. The substratum is very pale brown channery loam 8 inches thick. Hard sandstone is at a depth of 30 inches. Depth to sandstone ranges from 20 to 40 inches.

Permeability of this Piceance soil is moderate. Available water capacity is moderately low. Effective rooting depth is 20 to 40 inches. Runoff is slow to medium, and the hazard of water erosion is moderate to high.

70-Redcreek-Rentsac complex (5 to 30 percent slopes) is found on mountainsides and ridges. The native vegetation is mainly pinyon and juniper trees with an understory of shrubs and grasses.

The Redcreek soil is shallow and well drained. It formed in residual and eolian material derived dominantly from sandstone. Typically, the surface layer is brown sandy loam about 4 inches thick. The next layer is brown, calcareous sandy loam about 7 inches thick. The underlying material is very pale brown, calcareous channery loam 5 inches thick. Hard sandstone is at a depth of 16 inches. Depth to hard sandstone or hard shale ranges from 10 to 20 inches.

Permeability of the Redcreek soil is moderately rapid. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium, and the hazard of water erosion is moderate to high.

The Rentsac soil is shallow and well drained. It formed in residuum derived dominantly from sandstone. Typically, the upper part of the surface layer is grayish brown channery loam about 5 inches thick. The next layer is brown very channery loam about 4 inches thick. The underlying material is very pale brown extremely flaggy loam 7 inches thick. Hard sandstone is at a depth of 16 inches. Depth to hard sandstone or hard shale ranges from 10 to 20 inches.

Permeability of the Rentsac soil is moderately rapid. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium, and the hazard of water erosion is moderate to high.

73-Rentsac channery loam (5 to 50 percent slopes) is a shallow, well drained soil found on ridges, foothills, and side slopes. It formed in residuum derived dominantly from calcareous sandstone. The native vegetation is mainly pinyon, juniper, brush, and grasses.

Typically, the surface layer is grayish brown channery loam about 5 inches thick. The next layer is very channery loam about 4 inches thick. The underlying material is extremely flaggy light loam 7 inches thick. Hard sandstone is at a depth of 16 inches. Depth to sandstone ranges from 10 to 20 inches.

Permeability of this Rentsac soil is moderately rapid. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is rapid, and the hazard of water erosion is moderate to very high.

75-Rentsac-Piceance complex (2 to 30 percent slopes) is located on uplands, broad ridges, and foothills. The native vegetation is mainly sparse stands of pinyon and juniper and open areas of sagebrush.

The Rentsac soil is shallow and well drained. It formed in residuum derived dominantly from sandstone. Typically, the surface layer is grayish brown channery loam about 5 inches thick. The next layer is brown, strongly calcareous very channery loam about 4 inches thick. The underlying material is very pale brown extremely flaggy light loam 7 inches thick. Hard sandstone is at a depth of 16 inches. Depth to sandstone ranges from 10 to 20 inches.

Permeability of the Rentsac soil is moderately rapid. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium, and the hazard of water erosion is moderate to high.

The Piceance soil is moderately deep and well drained. It formed in eolian material and colluvium derived dominantly from sandstone. Typically, the surface layer is brown fine sandy loam 4 inches thick. The upper 5 inches of the subsoil is brown loam, and the lower 13 inches is light yellowish brown loam. The substratum is very pale brown channery light loam 8 inches thick. Hard sandstone is at a depth of 30 inches. Depth to sandstone or hard shale ranges from 20 to 40 inches.

Permeability of the Piceance soil is moderate. Available water capacity is low. Effective rooting depth is 20 to 40 inches. Runoff is slow to medium, and the hazard of water erosion is slight to moderate.

Environmental Consequences of the Proposed Action: Construction of the well pad and the access road will result in significant losses in vegetation and ground cover. The erosive potential of the affected soils combined with improper drainage from the project areas will increase potential for overland flows and accelerate erosional processes. Increased truck traffic will elevate soil compaction decreasing infiltration rates which in turn will also increase potential for erosive overland flows.

Leaks or spills of environmentally unfriendly substances (e.g. diesel or deep ground water) on or near the pad may contaminate soils hindering revegetation efforts. Soils unable to support a healthy plant community will be less cohesive (due to lack of root structure) and more vulnerable to erosional processes.

Environmental Consequences of the No Action Alternative: None

Mitigation: Comply with "Gold Book" surface operating standards for constructing well pads and access roads. Use drain dips in place of culverts on slopes exceeding 10%. Energy dissipaters such as large gravels/small cobbles will be used at culvert and drainage dip outlets to minimize additional erosion.

Revegetate all disturbed surfaces following construction with Native Seed Mix #3 as defined in the White River Resource Area RMP. Flow deflectors and sediment traps (woody debris) must also be utilized in attempts to mitigate erosive potential of overland flows. Stockpiled soils must be covered and silt fences will be situated down gradient

To reduce the impacts of compaction and rut development caused by increased traffic on newly constructed access roads, only BLM authorized motorized vehicle travel will be permitted. Gate installation combined with additional physical obstructions (e.g. rock boulders) will be necessary to keep unauthorized traffic from deteriorating the roadway.

To mitigate contamination of soils and local ground water, environmentally unfriendly substances (e.g. diesel and deep ground water) must not be allowed to contact soils. The use of impermeable matting under equipment is suggested to intercept such contaminants prior to contacting soils.

Complete reclamation will follow abandonment of well pad. Access road and well pad will be recontoured and 100% of disturbed surfaces will be revegetated with Native Seed Mix #3.

Finding on the Public Land Health Standard for upland soils: At the present time, soils in the vicinity of the proposed actions exhibit infiltration and permeability rates that are appropriate to soil type, landform, climate, and geologic processes. The proposed actions will cause decreases in both infiltration and permeability rates due to soil compaction and loss of vegetal cover. However, following proper mitigation the state of soil health should not be changed from current conditions, and land health standards would continue to be met.

VEGETATION (includes a finding on Standard 3)

Affected Environment: location 34-19-198 occurs on 84 Mesa , the largest Wyoming big sagebrush park in Piceance Basin. The access road looks like it's going to follow the reclaimed county road which cuts diagonally through the northeast quarter of Section 20. Location 31-2-298 and access road occurs in mature pinyon-juniper woodland. Location 31-20-298 and access occurs in both sparse and mature pinyon –juniper woodland. In areas where tree density is not great there is a well developed native grass/forb understory with Wyoming big sagebrush.

Environmental Consequences of the Proposed Action: The principal impact to vegetation will be complete removal of vegetation on the well sites and the earthen disturbance associated with it. In terms of plant community composition, structure and function, the principal negative impact over the long term would occur if invasive species or noxious weeds are allowed to establish and proliferate on the disturbed areas resulting from pad and access road construction. If operations occur from May through November, truck traffic on access roads will create a large amount of airborne dust which will be deposited on vegetation adjacent to roads. These deposits will impair plant function and also limit/prevent use of the vegetation by native and domestic herbivores.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation: 1) Promptly recontour and revegetate all disturbed areas including cut and fill slopes, topsoil stockpiles and road borrow areas with native Seed Mix #3 (see Invasive Non-Native Species section above).

2) Eradicate all invasive species and noxious weeds using materials and methods approved in advance by the Field Manager.

3) The operator will be required to water/surface roads to reduce or eliminate airborne dust.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* Plant communities in the project area currently meet the Standard and are expected to continue to meet the Standards following implementation of this action

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: The proposed locations for wells 31-20, 31-2 and 34-19 are at least 7.11, 3.15, and 0.68 miles, respectively, from perennial systems that are capable of supporting aquatic communities (see Wetlands and Riparian Zones section above).

Environmental Consequences of the Proposed Action: Aquatic habitats associated with downstream perennial systems would not be measurably influenced by the construction of the proposed well pads or access road.

Environmental Consequences of the No Action Alternative: There would be no immediate action authorized that would have potential to affect wetland or riparian communities. Although alternate locations could be presented under this alternative, they would probably be as unlikely to involve aquatic resources as the proposed action.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): Because there are no aquatic habitats or animals potentially influenced by the proposed or no-action alternatives, a land health standard finding is not relevant. The proposed and no action alternatives would have no measurable influence on aquatic habitats associated with downstream systems (see Wetlands and Riparian Zones section above).

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The Pinyon-juniper/mixed-shrub habitats are used by big game as severe winter ranges at the proposed location for well 31-2, and these areas sustain approximately 90% of the Piceance deer population during extreme winter conditions.

The proposed pad locations for wells 31-2 and 31-20 were inspected by a BLM biologist for raptor nesting activity in April 2004. The 34-19 location is located on a large sagebrush mesa

that is devoid of raptor nesting habitat. No raptor nests were documented within the proposed project areas.

Nongame bird abundance and composition associated with the project areas' woodland and shrubland habitats are considered representative and complete with no obvious deficiencies in composition. Small mammal populations and distribution are poorly documented; however, the species potentially occurring on these sites are widely distributed throughout the State and the Great Basin or Rocky Mountain regions. All of these upland species display broad ecological tolerance and are documented from habitats ranging from foothill to alpine sites. No narrowly distributed or highly specialized species or sub-specific populations are known to occur in Piceance Basin.

Environmental Consequences of the Proposed Action: The behavioral effects of oil and gas activity on deer during the late winter and early spring period (i.e., avoidance and disuse of available forage, elevated energetic drain) would be most pronounced on severe winter range. It is recommended that, regardless of prevailing winter weather conditions, development of the 31-2 pad (i.e., pad construction, drilling, and completion activities) be scheduled to avoid the period between January 1 and April 15.

Environmental Consequences of the No Action Alternative: No immediate action would be authorized that would involve the adverse modification of terrestrial wildlife habitats. Alternate pad locations may be increasingly likely to be situated more distant from established roads, thereby involving more extensive access needs and more extensive direct and indirect involvement of functional habitat.

Mitigation: It is recommended that, regardless of prevailing winter weather conditions, development of the 31-2 pad (i.e., pad construction, drilling, and completion activities) be scheduled to avoid the period between January 1 and April 15.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The project areas meet the public land health standards for terrestrial animal communities. As conditioned, the proposed action would have negligible long term influence on the utility or function of big game, raptor, or nongame habitats surrounding these wells. In an overall context, lands affected by the no-action or proposed action, as conditioned, would continue to meet the land health standard for terrestrial animals.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation			X
Cadastral Survey	X		
Fire Management		X	
Forest Management	X		
Geology and Minerals			X

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Hydrology/Water Rights		X	
Law Enforcement		X	
Noise		X	
Paleontology			X
Rangeland Management		X	X
Realty Authorizations			X
Recreation			X
Socio-Economics		X	
Visual Resources			X
Wild Horses			X

ACCESS AND TRANSPORTATION

Affected Environment: Proposed wells 31-2-298, 34-19-198 are located in an area where cross country motorized travel is permitted from May 1 through September 30 and limited to existing routes the remainder of the year. Proposed well 31-20-298 is located in an area where motorized travel is limited to existing routes year-round. Access to proposed well 31-2-298 will be BLM road 1148. Access to proposed well 31-20-298 will be off of Rio Blanco County road 85. Access to proposed well 34-19-198 will be off of private lands.

Environmental Consequences of the Proposed Action: An increase of road travel associated with construction and maintenance of wells and pads are expected.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

GEOLOGY AND MINERALS

Affected Environment: William's wells #34-19-198, 31-2-298, and 31-20-298 are located on federal oil and gas leases COC-60730, 60736, and COC-62054 respectively. Well 31-20-298 is in the area identified in the White River ROD/RMP as available for oil shale and sodium leasing and wells 34-19-198, 31-2-298 are in an area identified as available for multi-mineral leasing. Well 34-19-198 is located within 800 feet of existing federal sodium lease COC-0119985. The surface geologic formation of the well location is Uinta with the Green River, Wasatch and Mesaverde formations being penetrated during drilling. The targeted zone is located in the lower Mesaverde/upper Mancos. Potential water, oil shale, sodium, and gas zones will be encountered from surface to the targeted zone. Aquifers that will be encountered during drilling are the Perched in the Uinta, the A-groove, B-groove and the Dissolution Surface in the Green River formation. Sodium and oil shale resources will be encountered in the Green River formation. Potential Gas producing formations include the Wasatch and Mesaverde.

The Green River aquifer zones and the Wasatch are known for difficulties in drilling and cementing.

Environmental Consequences of the Proposed Action: Drilling and completion of this well may adversely affect the aquifers and the monitoring wells if there is loss of circulation or problems cementing the casing. The proposed cementing and completion procedure of the surface casing protects and isolates the aquifers in the Green River formation. Potential gas zones in the Wasatch will not be cover with cement which may allow the migration of gas along the annulus of the production casing. The Mesaverde will be covered with cement isolating the gas zones in the formation. Development of this well will deplete the hydrocarbon resources in the targeted formation.

Environmental Consequences of the No Action Alternative: None

Mitigation: The production casing should be cemented from TD to surface casing to cover the potential gas zones in the Wasatch.

PALEONTOLOGY

Affected Environment: Ryan Gulch 31-20-298 well pad and access road:

Ryan Gulch 31-2-298 well pad and access road:

Ryan Gulch 34-19-198 well pad and access road: the proposed well pad and access road are located in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM has classified as a Condition I fossil formation, meaning it is known to produce scientifically important fossil resources.

Environmental Consequences of the Proposed Action: Ryan Gulch 31-20-298 well pad and access road:

Ryan Gulch 31-2-298 well pad and access road:

Ryan Gulch 34-19-198 well pad and access road: If it becomes necessary to excavate into the underlying rock to construct the access road, level the well pad or excavate the reserve/blooie pit there is a potential to impact scientifically important fossil resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to fossil resources under the No Action Alternative.

Mitigation: Ryan Gulch 31-20-298 well pad and access road:

Ryan Gulch 31-2-298 well pad and access road:

Ryan Gulch 34-19-198 well pad and access road: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for

knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. A paleontological monitor shall be present before and during all construction.

RANGELAND MANAGEMENT

Affected Environment:

31-20-298: This location is within the Reagle (06026) allotment. Authorized grazing use is as follows: Larry Mautz: 70 Cattle 5/1- 12/15
Dean Mantle: 81 Cattle 5/1- 12/15

31-2-298: This location and access is on the Square S (06027) grazing allotment. This pasture is used primarily in the winter/spring by the Mantle Ranch and Boone Vaughn cattle operations. On the Square S allotment, the Mantle Ranch base herd is 230 cows and the Boone Vaughn base herd is 500 cows.

34-198: This location and access road is located on 84 Mesa within the Yellow Creek allotment (06030). Burke Brothers use the 84 Mesa area in the late spring and fall as part of the annual cattle operation on public lands.

Environmental Consequences of the Proposed Action: If the integrity of the affected fences is not maintained, intra-allotment livestock trespass could occur. If airborne dust coats vegetation adjacent to roads, the usability of that vegetation for forage will be negatively impacted (*see* Vegetation section). If the waterline is damaged by oil and gas operations, livestock operations on both the Reagle and Square S allotments will be negatively impacted as the water system serves both allotments. If airborne dust coats vegetation adjacent to roads, the usability of that vegetation for forage will be negatively impacted (*see* Vegetation section).

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation: 1. The access road for 31-20 will have to be moved. As it is flagged now, it crosses and follows the direct route of the existing BLM Equity waterline. A cattleguard will also need to be installed wherever the relocated access road crosses the existing Reagle/Square S allotment boundary fence. The existing fence shall be properly braced on either side of the cut. All fence and cattleguard work will be to BLM specifications. Williams will also be held responsible for maintaining the integrity of the existing waterline which parallels the fence. That is, if they damage it they will have to promptly repair it to BLM specifications.

2. The access road for 34-19-198 crosses the 84 Ranch boundary fence in Sec 30, SENE. This is the allotment boundary fence for the Yellow Creek (06030) allotment. The fence will have to be properly braced prior to cutting and a minimum 20' wide cattleguard will have to be installed to BLM specifications. The integrity of this fence must be maintained at all times.

REALTY AUTHORIZATIONS

Affected Environment: The off-lease segment of the access for the 31-20-298 will require a right-of-way and will be an amendment to the existing right-of-way COC67964.

Environmental Consequences of the Proposed Action: The proposed action will require a right-of-way for the off-lease segment of the access road from where it leaves County Road 83 to the lease boundary. The off-lease segment is 2,000 feet in length with a width of 35 feet encompassing 1.61 acres more or less.

Environmental Consequences of the No Action Alternative: None

Mitigation: The access road will be built to BLM standards and the "Gold Book" specifications for surface operating standards for oil and gas exploration and development.

RECREATION

Affected Environment: The proposed action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use.

The area surrounding proposed wells 31-20-298 and 31-2-298 has been delineated a Recreation Opportunity Spectrum (ROS) class of Semi-Primitive Motorized (SPM). SPM physical and social recreation setting is typically characterized by a natural appearing environment with few administrative controls, low interaction between users but evidence of other users may be present. SPM recreation experience is characterized by a high probability of isolation from the sights and sounds of humans that offers an environment that offers challenge and risk.

The area surrounding proposed well 34-19-198 has been delineated a Recreation Opportunity Spectrum (ROS) class of Roaded Natural (RN). RN physical and social recreation setting may have modifications which range from being easily noticed to strongly dominant to observers within the area. However, from sensitive travel routes and use areas these alterations would

remain unnoticed or visually subordinate. There is strong evidence of designed roads and/or highways. Structures are generally scattered, remaining visually subordinate or unnoticed to the sensitive travel route observer. Structures may include utility corridors, microwave installations and so on. Frequency of contact is moderate to high on roads and low to moderate on trails and away from roads. SPM recreation experience is characterized by a moderate probability of isolation from the sights and sounds of humans that offers an environment that offers challenge and risk.

Environmental Consequences of the Proposed Action: The public will lose approximately 14 acres of dispersed recreation potential while wells are in operation. The public will most likely not recreate in the vicinity of these facilities and will be dispersed elsewhere. If action coincides with hunting seasons (September through November) it will most likely disrupt the experience sought by those recreationists.

With the introduction of new well pads and roads, an increase of traffic could be expected increasing the likihood of human interactions, the sights and sounds associated with the human environment and a less naturally appearing environment.

Environmental Consequences of the No Action Alternative: No loss of dispersed recreation potential and no impact to hunting recreationists.

Mitigation: None.

VISUAL RESOURCES

Affected Environment: The proposed actions are located in an area with a VRM III classification. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Environmental Consequences of the Proposed Action: The proposed actions are located near the tops of ridges (31-20 & 34-19) and near the top of a ridge (31-2) midway between Ryan Ridge and Ryan Gulch. For the 31-20, the nearest route traveled by a casual observer would be Ryan Gulch road (RBC 24) which is located at a lower elevation and the proposed action would not be visible. For the 31-2, the nearest routes traveled by a casual observer would be Ryan Ridge road (RBC 83) and Ryan Gulch road (RBC 24). RBC 83 is above the proposed action and RBC 24 is below the proposed action. For the 34-19, the nearest route that would be traveled by a casual observer is Piceance Creek road (RBS 5), which is located at a lower elevation and more than 5 miles distance from the proposed action. Since the proposed actions are all located in stands of Pinyon/Juniper, the proposed actions would not be visible from any of the routes traveled by a casual observer. By painting all production facilities a darker shade of color to reflect less light and mimic the surrounding vegetation, the level of change to the characteristic landscape should be low/moderate and the objectives of the VRM III classification would be retained.

Environmental Consequences of the No Action Alternative: There would be no additional impact.

Mitigation: Paint all production facilities Juniper Green.

WILD HORSES

Affected Environment: Well 34-19 of the proposed action is located in the Little Duck Creek vicinity of the Piceance-East Douglas wild horse herd management area (HMA). Horses affected by well 34-19 are part of the Duckwater sub-herd. This sub-herd relies on the country in and surrounding Big and Little Duck Creeks as a portion of their home range due to the accessible native range (forage) and proximity to dependable water sources. Foaling season, the time span when the majority of mares bear their young, is recognized as occurring between March 1 and June 15th each year.

Environmental Consequences of the Proposed Action: The direct impact resulting from construction of well 34-19 would be the loss of 5.01 acres of wild horse habitat. Wild horses in the Duck Creek vicinity of the HMA could be negatively affected by the increased human presence associated with vegetation clearing, leveling of the proposed pads and construction of the well.

It is recommended that the foaling timing limitation (LN-3: Activities delayed during a 60 day period within the spring foaling period between March 1 and June 15) be waived for this action since the proposed disturbance for 34-19 is in close proximity to existing roads.

Environmental Consequences of the No Action Alternative: Loss of *w*ild horse habitat in the Duck Creek vicinity of the HMA would not occur. Resident wild horse bands would not be subject to decreased forage availability and increased human presence.

Mitigation: None

CUMULATIVE IMPACTS SUMMARY: This action is consistent with the scope of impacts addressed in the White River ROD/RMP. The cumulative impacts of these activities are addressed in the White River ROD/RMP for each resource value that would be affected by the proposed action.

REFERENCES CITED:

Conner, Carl E, Curtis Martin, Barbara Davenport, and Nicole Darnell
2005 A Class III Cultural Resources Inventory for the Proposed RGU #34-19-198 Well Location and Related Access in Rio Blanco County, Colorado for Williams Production RMT Company. Grand River Institute, Grand Junction, Colorado.

Tweto, Odgen

1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginal

PERSONS / AGENCIES CONSULTED: None

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Nate Dieterich	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archeologist	Cultural Resources Paleontological Resources
Mark Hafkenschiel	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation, Rangeland Management
Brett Smithers	Natural Resource Specialist	Migratory Birds
Brett Smithers	Natural Resource Specialist	Threatened, Endangered and Sensitive Animal Species, Wildlife
Bo Brown	Hazmat Collateral	Wastes, Hazardous or Solid
Nate Dieterich	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Brett Smithers	Natural Resource Specialist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Nate Dieterich	Hydrologist	Soils
Brett Smithers	Natural Resource Specialist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Vern Rholl	Supervisory Natural Resource Specialist	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Keith Whitaker	Natural Resource Specialist	Visual Resources
Valerie Dobrich	Natural Resource Specialist	Wild Horses

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2005-155-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analysis of the environmental effects of the proposed actions have been reviewed. At this point in time, the proposal to drill the 34-19-198 well, as mitigated by the measures listed below, will NOT result in significant impacts to the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action of that project.

No determination is made for the proposed 31-20-298 or 31-2-298 wells pending review of further information

DECISION/RATIONALE: It is my decision to approve the proposed 34-19-298 Application for Permit to Drill, subject to the mitigation measures listed below. A decision regarding the proposed 31-20-298 and 31-2-298 Applications is deferred until receipt and review of acceptable cultural resources information.

MITIGATION MEASURES: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you

must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

3. The operator will be responsible for complying with all local, state, and federal air quality regulations as well as providing documentation to the BLM that they have done so. To minimize production of fugitive dust, vehicle speeds must not exceed 15 mph or dust clouds must not be visible at appropriate speeds. The application of a dust suppressant (e.g. water or "Dust Stop") will be required during dry periods when dust clouds are visible at speeds less than or equal to 15 mph. Stockpiled soils will be covered when left for a period greater than 10 hours, and all disturbed areas will be promptly revegetated.

4. The operator shall promptly recontour and revegetate all disturbed areas including cut and fill slopes, topsoil stockpiles and road borrow areas with native seed mix #3:

3	Western wheatgrass (Rosanna) Bluebunch wheatgrass (Whitmar) Needle and thread Indian ricegrass (Rimrock) Fourwing saltbush (Wytana) Utah sweetvetch Alternates: globemallow	2 2 1 1 1 1	Gravelly 10"-14", Pinyon/Juniper Woodland, Stony Foothills, 147 (Mountain Mahogany)

5. The operator shall eradicate all invasive species and noxious weeds using materials and methods approved in advance by the Field Manager.

6. The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Methods may include netting, the use of bird-balls, or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Petroleum Engineer Technician immediately.

7. The operator shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

8. No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 feet of any water bodies (including springs and seeps). The operator will be responsible for complying with all local, state, and federal water quality regulations as well as providing documentation to the BLM that they have done so.

9. Comply with "Gold Book" surface operating standards for constructing well pads, and access roads (copy available from the White River Field Office). In compliance with the resource management plan, drain dips will be used in place of culverts on slopes exceeding 10%. Energy dissipaters such as large gravels/small cobbles will be used at culvert and drainage dip outlets to minimize additional erosion.

10. To mitigate water being channelized down the roadway, all activity must stop when soils or road surfaces become saturated to a depth of three inches. Mud blading will be prohibited in attempts to reduce further soil displacement. In addition, to mitigate surface erosion due to removal of ground cover at well pads, stockpiled soils must be covered and silt fences will be used on down gradient sides.

11. Complete reclamation will follow abandonment of well pads and access roads. Access roads and well pads will be recontoured, flow deflectors and sediment traps (woody debris) will be evenly redistributed over all disturbed areas, and 100% of disturbed surfaces will be revegetated with native seed mix #3.

12. To mitigate contamination of local ground water, environmentally unfriendly substances (e.g. diesel) must not be allowed to contact soils. The use of impermeable matting under equipment is suggested to intercept such contaminants prior to contacting soils.

13. All pits must be lined and all wastes associated with construction and drilling will be properly treated and disposed of. Aquifers beneficial for human consumption and livestock encountered during the drilling process must be properly sealed to reduce potential for contamination.

14. To reduce the impacts of compaction and rut development caused by increased traffic on newly constructed access roads, only BLM authorized motorized vehicle travel will be permitted. Gate installation combined with additional physical obstructions (e.g. rock boulders) will be necessary to keep unauthorized traffic from deteriorating the roadway.

15. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

16. A paleontological monitor shall be present before and during all construction.

17. The production casing should be cemented from TD to surface casing to cover the potential gas zones in the Wasatch.

18. The access road for 34-19-198 crosses the 84 Ranch boundary fence in Sec 30, SENE. This is the allotment boundary fence for the Yellow Creek (06030) allotment. The fence will have to be properly braced prior to cutting and a minimum 20' wide cattleguard will have to be installed to BLM specifications. The integrity of this fence must be maintained at all times.

19. The operator shall paint all production facilities Juniper Green, or equivalent.

NAME OF PREPARER: Brett Smithers

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL: Kent F. Walter
Field Manager

DATE SIGNED: 7/19/05

ATTACHMENTS: Map of proposed project area locations.

Location of Proposed Action
CO-110-2005-155-EA